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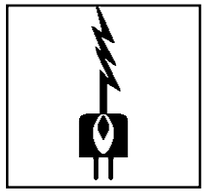
RATED ENCLOSURES

A rated enclosure is a type of construction designed to contain a fire for at least an hour. Typically open flame furnaces, boilers and water heaters are enclosed. This protective barrier completely seals the room to contain a potential fire. Any size hole in any part of the rated enclosure is an invitation for fire to spread more rapidly than designed. Doors, pipes, wires and ducts through these walls must maintain their seal or else fire will rapidly seek out these “fresh air” holes and escape.

VENT PIPES

All but electric furnaces, boilers and water heaters burn a fuel that leaves behind toxic gases. If these gases are not vented, they can contaminate the air with lethal consequences. Carbon monoxide is a colorless, tasteless, odorless gas that can kill without warning. Pipes and vents are specifically installed to take these harmful gases outside. Care must be taken to inspect these and repair them if cracked or missing. Over time, these pipes and seals fail and maintenance is required. Other devices with vents requiring inspection might be space heaters and incinerators. The area where pipes enter the chimney should also be checked to make sure this important seal is intact. A monthly inspection is warranted if you suspect possible accidental contact with these vent pipes.



EXTENSION CORDS

Any device that is permanently mounted CANNOT have an extension cord on it. Typically washers, dryers, refrigerators, built-in dishwashers, microwaves, and wall ventilation fans are considered permanent. Trouble lights strung across a ceiling and nailed in place are illegal. Adding extension cords to a circuit increases resistance and that heats up the wire. The chances of a fire are increased with longer cords. Never use an extension cord with air conditioners or space heaters.

OPEN ELECTRICAL PANELS

When a short occurs in an electrical circuit, the energy is hot enough to melt the wire and send a piece of 2000° molten metal flying across a room. That is a significant fire and injury risk. That is why electrical panels and circuits are confined in grounded metal cases. Bare wires contain the potential energy to release these “fire balls” anytime a face plate is missing or a panel is left open. The potential for an electric shock is even greater in the basement because of the uninsulated concrete floor. Over half of the fatal electrocutions in the U.S. occur in the basement. Grounding wires need to be left in place and circuit panels closed if the electrical system is to function properly and safe operation is expected.

AN OUNCE OF PREVENTION

The cost of preventing fire losses are much less than the potential costs of an actual fire and possible litigation. Owners need to take an active role in fire prevention. These are ONLY minimal standards. Inspections should be a learning experience and a chance to share information. Playing the game of “gotcha” makes more work for both the owner and inspector. It does not add value to anything. The codes of today are the results of lessons learned from past tragedies involving death or injury of innocent people. Pro-active compliance saves the owner hassles from lawsuits and liability minded individuals. It minimally protects the property investment and saves priceless lives in the end.

SAFE BUILDINGS ARE NO ACCIDENT.

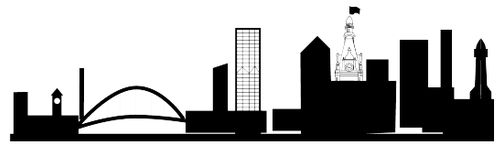
For more information contact the Department of Neighborhood Services Commercial Section at 414-286-3874.

Other building safety information is available at the Department of Neighborhood Services web site at:

www.milwaukee.gov/dns

Other DNS brochures available on-line!

Emergency Planning Requirements
Requirements for High-rise Buildings
Free Landlord Training Program
Landlord/Tenant Rights Information
Signage Limits for Buildings
Barrier Installations
Chronic Nuisance Properties
Boarded-Up Building Ordinance



Common Fire Code Violations

A quick reference guide to understanding commonly found fire code violations

- **Fire Extinguishers**
- **Smoke Alarms**
- **Exiting Situations**
- **Hazard Identification**
- **Lock Security**

City of Milwaukee Department of Neighborhood Services

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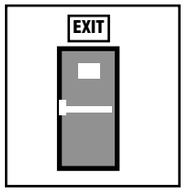
EXIT SIGNS

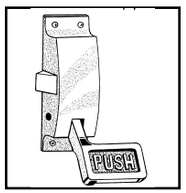
Exit signs identify the safest routes out of a building. An exit sign that is defective or burned out will not identify the safe routes of travel, through dark and smokey conditions. New technology in long lasting bulbs and exit signs is available. Contact a lighting specialist in the yellow pages under “Light Bulbs & Tubes” section.



EXIT DOORS

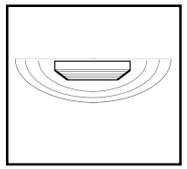
One of the most important life safety features of a building are the exits. Many fatalities occur when exit routes are blocked.Smoke and fire in exit ways can prevent exiting; that is why doors leading to stairways and hallways should remain closed at all times to isolate smoke from the safe route out.

Wedging doors open may be a deadly convenience that will cost lives. Common violations are; furniture in hallways and appliances in stairwells. In commercial stores, display racks and excess stock should not be in the way of an exit path. There is no time to move these items if a fire breaks out.



EXITING HARDWARE AND SECURITY

State code requires all required exit doors to be openable in one motion. Inside keyed locks are prohibited from most types of commercial occupancies. Residential occupancies also require security devices. Deadbolts are required on individual doors leading to common hallways and the exterior. Wooden double hung dwelling unit windows within 10 ft of grade need special security requirements. These windows, in addition to the sash closing latch, must be able to be secured in the opened “vent” position between 4”-6”. A nail in a downward slanted drill hole through the window into the sash is a cheap secure code compliant system.

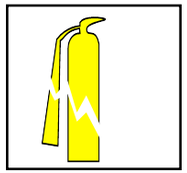


SMOKE ALARMS

Smoke alarms properly working are silent guardians. However, without a battery, they are silent killers. Many people disable their smoke alarm after a false alarm. A battery is the cheapest life and property “insurance” one can buy. Not ALL 9–volt batteries work in ALL alarms. Follow manufacturer’s recommendations for placement and maintenance. If the alarm immediately activates after installing a new battery, it may have to be replaced. The special ionization material in the sensing chamber wears out after about 10 years. Replace the battery annually, BEFORE the low battery “chirping” begins. Never put alarms in kitchens or bathrooms. Moisture and cooking odors may trigger them. Any smoke alarm located within 20 feet of the primary cooking appliance within a unit must have a “Hush” button. Permanently mount alarms to avoid tampering or theft. Deadly fires may occur when protection is absent. Don’t wait to replace defective or missing smoke alarms.

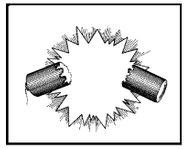
FIRE ALARMS

A fire alarm system alerts building occupants that a fire is present. All fire alarm systems are required to be tested annually by qualified service personnel. A written record of all inspections and testing shall be maintained. Testing assures the system is fully operational. Alarm systems remain the most immediate means to alert occupants of danger.



FIRE EXTINGUISHERS

The primary tool to stop fire is an extinguisher. Before attempting to extinguish any fire, the building occupants and the fire department should be notified. Like all tools, extinguishers need care and maintenance or they won’t work. Extinguishers need annual inspections and maintenance by knowledgeable technicians. Their annual inspection assures the owner of proper operation. Dry units need to be completely refilled every six years. Pressurized water units require hydrostatic testing every five years. Don’t wait to replace missing or discharged extinguishers.



STORAGE OF FLAMMABLE MATERIALS

Most people would NOT think of storing dynamite in their homes or businesses. Yet many do something just as dangerous. One evaporated gallon of gasoline has the equivalent energy of 50 lbs. of dynamite. Demolition crews can topple highrise buildings with as little as 15 lbs. of TNT. In most commercial buildings, no gasoline, alcohol solvents, combustible thinners or flammable liquids are allowed in the basement. Such flammables may be stored in limited quantities on the first floor based on the type of occupancy. Consult your building inspector for specifics. NO GASOLINE is allowed to be stored in any residential or mixed use occupancy. Gasoline fumes sink. Basements typically have furnaces and water heaters with pilot lights. A leaky lawn mower or snow blower can drip fuel causing fumes which could lead to an explosion.

PRESSURIZED CYLINDERS

Many occupancies require the use of compressed gases. Medical, welding, tavern and restaurant uses typically have tanks of various flammable and non-flammable gas. If these cylinder tanks should tip over and break the valve off, the sudden release of gas can turn the tank into a deadly torpedo. Such a force could penetrate a brick wall not to mention the destruction if the gas is combustible. All pressurized cylinders must be secured from falling. L.P. gas grills with tanks attached should never be stored inside a building.

PROPER STORAGE

Space for people needs to come before space for product. The improper placement of goods can block vital exit routes, hide exit signs and harbor spots for spontaneous combustion. NO combustibles can be stored under stairways. It would be the worst place for fire to start. A fire here eliminates escape from the above floor. Trash is a common source of fires and excessive amounts should be taken outside every 24 hours. High stacked stock can block exit lights and interfere with sprinkler systems. For sprinklered buildings a clear space of 18” from every head is required. Non-sprinklered buildings must keep a 24” clearance to the ceiling (in most cases.)These limits assure minimal function of sprinkler systems and safe exit routes for people.

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